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01/6

#19



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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/029,221C

DATE: 01/22/2003

TIME: 15:48:47

Input Set : A:\Div14621.app

Output Set: N:\CRF4\01222003\J029221C.raw

3 <110> APPLICANT: SHORT, JAY M.
 4 DJAVAKHISHVILI, TSOTNE D.
 5 FREY, GERHARD J.
 7 <120> TITLE OF INVENTION: EXONUCLEASE-MEDIATED NUCLEIC ACID REASSEMBLY IN
 8 DIRECTED EVOLUTION
 10 <130> FILE REFERENCE: DIV-1460-21
 12 <140> CURRENT APPLICATION NUMBER: 10/029,221C
 C--> 13 <141> CURRENT FILING DATE: 2003-01-10
 15 <150> PRIOR APPLICATION NUMBER: 60/008,311
 16 <151> PRIOR FILING DATE: 1995-12-07
 18 <150> PRIOR APPLICATION NUMBER: 60/008,316
 19 <151> PRIOR FILING DATE: 1995-12-07
 21 <160> NUMBER OF SEQ ID NOS: 13
 23 <170> SOFTWARE: PatentIn Ver. 2.1
 25 <210> SEQ ID NO: 1
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 27 <212> TYPE: DNA
 28 <213> ORGANISM: Artificial Sequence
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 31 <223> OTHER INFORMATION: Description of Artificial Sequence: Illustrative
 32 restriction enzyme recognition site
 34 <220> FEATURE:
 35 <221> NAME/KEY: modified_base
 36 <222> LOCATION: (7)..(22)
 37 <223> OTHER INFORMATION: a, t, c or g; this range may encompass 14 or 16 nucleotides
 39 <400> SEQUENCE: 1
 W- 40 ctgaagnnnnn nnnnnnnnnnn nn 22
 43 <210> SEQ ID NO: 2
 44 <211> LENGTH: 5
 45 <212> TYPE: PRT
 46 <213> ORGANISM: Artificial Sequence
 48 <220> FEATURE:
 49 <223> OTHER INFORMATION: Description of Artificial Sequence: Linker peptide
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 53 1 5
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 57 <211> LENGTH: 15
 58 <212> TYPE: PRT
 59 <213> ORGANISM: Artificial Sequence
 61 <220> FEATURE:
 62 <223> OTHER INFORMATION: Description of Artificial Sequence: Linker peptide
 64 <400> SEQUENCE: 3

ENTERED

RAW SEQUENCE LISTING

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66 1 5 10 15
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75 <223> OTHER INFORMATION: Description of Artificial Sequence: Illustrative
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79 <221> NAME/KEY: modified_base
80 <222> LOCATION: (6)..(10)
81 <223> OTHER INFORMATION: a, t, c or g
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89 <212> TYPE: DNA
90 <213> ORGANISM: Artificial Sequence
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94 restriction enzyme recognition site
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97 cgcgctggac 10
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101 <211> LENGTH: 223
102 <212> TYPE: DNA
103 <213> ORGANISM: Artificial Sequence
105 <220> FEATURE:
106 <223> OTHER INFORMATION: Description of Artificial Sequence: Formula
107 sequence
109 <220> FEATURE:
110 <221> NAME/KEY: modified_base
111 <222> LOCATION: (1)..(10)
112 <223> OTHER INFORMATION: a, t, c or g; this range may encompass 1-10 nucleotides
114 <220> FEATURE:
115 <221> NAME/KEY: modified_base
116 <222> LOCATION: (21)..(120)
117 <223> OTHER INFORMATION: a, t, c or g; this range may encompass 1-100 nucleotides
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121 <221> NAME/KEY: modified_base
122 <222> LOCATION: (124)..(223)
123 <223> OTHER INFORMATION: a, t, c or g; this range may encompass 0-100 nucleotides
126 <400> SEQUENCE: 6
W--> 127 nnnnnnnnnn aagggaggag nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60
W--> 128 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120
W--> 129 atgnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180
W--> 130 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnn 223
133 <210> SEQ ID NO: 7

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RAW SEQUENCE LISTING

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Input Set : A:\Div14621.app

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135 <212> TYPE: DNA
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139 <223> OTHER INFORMATION: Description of Artificial Sequence: Formula
140     sequence
142 <220> FEATURE:
143 <221> NAME/KEY: modified_base
144 <222> LOCATION: (1)..(10)
145 <223> OTHER INFORMATION: a, t, c or g; this range may encompass 1-10 nucleotides
147 <220> FEATURE:
148 <221> NAME/KEY: modified_base
149 <222> LOCATION: (16)..(115)
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153 <221> NAME/KEY: modified_base
154 <222> LOCATION: (116)..(215)
155 <223> OTHER INFORMATION: a, t, c or g; this range may encompass 0-100 nucleotides
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W--> 159 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120
W--> 160 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180
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173 <221> NAME/KEY: modified base
174 <222> LOCATION: (24)..(123)
175 <223> OTHER INFORMATION: a, t, c or g; this range may encompass 10-100 nucleotides
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W--> 178 ctagaagaga ggagaaaacc atgnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60
W--> 179 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120
W--> 180 nnn 123
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185 <212> TYPE: DNA
186 <213> ORGANISM: Artificial Sequence
188 <220> FEATURE:
189 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
191 <220> FEATURE:
192 <221> NAME/KEY: modified_base
193 <222> LOCATION: (22)..(121)
194 <223> OTHER INFORMATION: a, t, c or g; this range may encompass 10-100 nucleotides
196 <400> SEQUENCE: 9
W--> 197 gatcaaaggc gcgcctgcag gnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn 60

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/029,221C

DATE: 01/22/2003

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Input Set : A:\Div14621.app

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W--> 198 nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn 120

W--> 199 n 121

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204 <212> TYPE: DNA

205 <213> ORGANISM: Artificial Sequence

207 <220> FEATURE:

208 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer

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211 ctagaaggga ggagaaaacc atg

23

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215 <211> LENGTH: 21

216 <212> TYPE: DNA

217 <213> ORGANISM: Artificial Sequence

219 <220> FEATURE:

220 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer

222 <400> SEQUENCE: 11

223 gatcaaaggc ggcctgcag g

21

226 <210> SEQ ID NO: 12

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228 <212> TYPE: DNA

229 <213> ORGANISM: Artificial Sequence

231 <220> FEATURE:

232 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer

234 <400> SEQUENCE: 12

235 ctagaaggga ggagaattac atgaagcggc ttttagccc

39

238 <210> SEQ ID NO: 13

239 <211> LENGTH: 27

240 <212> TYPE: DNA

241 <213> ORGANISM: Artificial Sequence

243 <220> FEATURE:

244 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer

246 <400> SEQUENCE: 13

247 agctaagggt caaggccgca cccgagg

27

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/029,221CDATE: 01/22/2003
TIME: 15:48:48Input Set : A:\Div14621.app
Output Set: N:\CRF4\01222003\J029221C.rawPlease Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:6; N Pos. ~~1, 2, 3, 4, 5, 6, 7, 8, 9, 10~~, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33
Seq#:6; N Pos. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53
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Seq#:6; N Pos. 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93
Seq#:6; N Pos. 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109
Seq#:6; N Pos. 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, ~~120~~, 124, 125, 126, 127
Seq#:6; N Pos. 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142
Seq#:6; N Pos. 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157
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Seq#:6; N Pos. 218, 219, 220, 221, 222, ~~223~~
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Seq#:7; N Pos. 212, 213, 214, ~~215~~
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Seq#:9; N Pos. ~~22~~, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41
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